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states:(71) Applicant: **HITACHI METALS LTD**(72) Inventor: **SUENAGA MAKOTO
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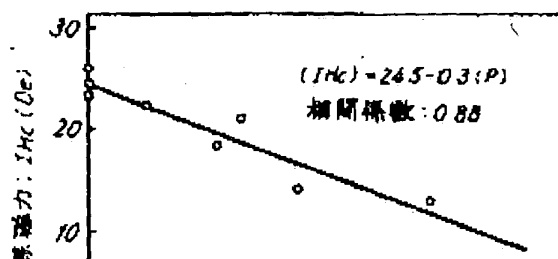
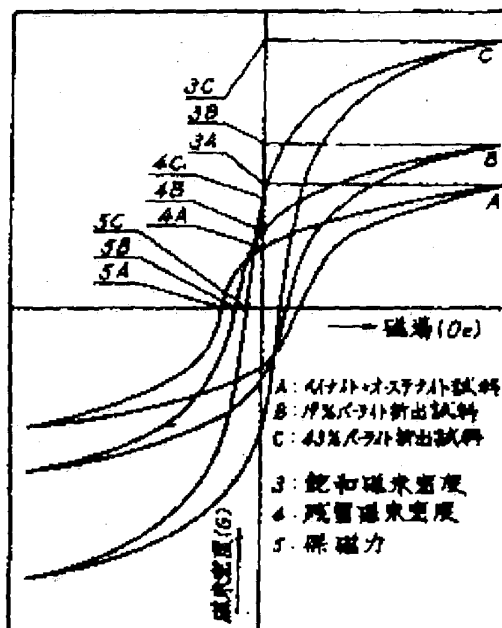
(74) Representative:

**(54) DISCRIMINATING
METHOD OF
PRECIPITATION OF
PEARLITE**

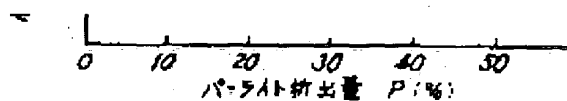
(57) Abstract:

PURPOSE: To permit easy quality control of a spheroidal graphite cast iron having a mixed structure of bainite and residual austenite by measuring the difference in magnetic characteristic of the pearlite precipitated to said cast iron and detecting nondestructively and easily the pearlite with high accuracy.

CONSTITUTION: The specific values on a magnetic hysteresis curve, for example, coercive forces 5A, 5B, 5C residual magnetic flux densities 4A, 4B, 4C and satd. magnetic flux densities 3A, 3B, 3C shown in the figure are measured by making use of the appearance of a difference in said curve with the pearlite precipitated on the spheroidal graphite cast iron having a mixed



structure of bainite and residual austenite. The hysteresis curve A represents the sample consisting of bainite and austenite, the curve B the sample precipitated with 19% pearlite and the curve C the sample precipitated with 43% pearlite. These magnetic characteristics are respectively in the linear relation with the amt. of the precipitated pearlite as shown in, for example, the figure and therefore the amt. of the pearlite precipitated is made easily discriminatable with high reliability.



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